

WHAT IS CLAIMED IS:

1. An end cap for an internal combustion engine muffler having a muffler casing defining a muffler chamber, said end cap comprising:  
an end wall having an aperture;  
a mounting structure dimensioned and configured for securing said end wall to an end of the muffler casing; and  
a tubular member extending from said end wall adjacent to and surrounding said aperture, said tubular member and said aperture defining an inlet/outlet port for the muffler chamber;  
wherein said end wall, said mounting structure and said tubular member are monolithically formed with said end wall.
2. The end cap of claim 1, wherein said end wall includes a peripheral shoulder extending along at least a portion of a periphery of said end wall.
3. The end cap of claim 2, wherein said peripheral shoulder defines an stepped land and a substantially flat outer surface.
4. The end cap of claim 1, wherein said aperture and said tubular member are centrally located on said end wall.
5. The end cap of claim 1, wherein said aperture and said tubular member are asymmetrically located on said end wall.
6. The end cap of claim 1, further comprising a filleted portion at the intersection of said end wall and said tubular member, said filleted portion being monolithically formed with said end wall and said tubular member.
7. A muffler comprising the end wall of claim 1.

8. A method of forming a muffler end cap, said method comprising:  
providing a substantially flat metal blank;  
forming a tubular member having a bore and an end wall from said blank  
thereby monolithically forming said tubular member and said end wall from said blank.
9. The method of claim 8 wherein said forming step is accomplished by at least one stamping operation.
10. The method of claim 9 wherein said forming step is accomplished by at least one deep drawing operation.
11. An end cap formed by the method of claim 10.
12. A muffler comprising the end cap of claim 11.
13. A muffler for an internal combustion engine, said muffler comprising:  
a main body including a casing defining a muffler chamber, said casing having a forward end and a rearward end;  
a forward end cap including a forward end wall having an inlet aperture, a forward mounting structure secured to said forward end of said casing, and an inlet tube extending forwardly from said forward end wall forming an inlet to said muffler chamber, said forward end wall and said inlet tube being monolithically formed; and  
a rearward end cap including a rearward end wall having an outlet aperture, a rearward mounting structure secured to said rearward end of said casing, and an outlet tube extending rearwardly from said rearward end wall forming an outlet from said muffler chamber, said rearward end wall and said outlet tube being monolithically formed.
14. The muffler of claim 13 wherein said casing includes an oblong tubular member defining said muffler chamber.

15. The muffler of claim 13, wherein said forward mounting structure includes a forward mounting flange extending around a periphery of said forward end wall welded to said forward end of said casing, and said rearward mounting structure includes a rearward mounting flange extending around a periphery of said rearward end and welded to said rearward end of said casing.

16. The muffler of claim 15, wherein at least one of said inlet and outlet tubes is centrally located on at least one of the respective forward and rearward end walls.

17. The muffler of claim 15, wherein at least one of said inlet and outlet tubes is asymmetrically located on at least one of the respective forward and rearward end walls.